

REMARKS

Favorable reconsideration and allowance of this application are requested.

As a procedural note, the present amendment is being filed concurrently with a formal Request for Continued Examination (RCE) under 37 CFR §1.114. Accordingly withdrawal of the "finality" of the March 20, 2006 Official Action is in order so as to allow entry and consideration of the amendments and remarks presented herewith.

By way of the amendment instructions above, independent claims 1 and 19 have been revised so as to emphasize that the method of the present invention includes further tensioning of the surgical cable around the objects with the help of a device. Support for such a recitation can be found, for example, on page 4, lines 12-13.¹

Therefore, claims 1-20 remain pending herein with independent claims 1 and 19 having been amended as noted above. As will become evident from the following discussion, all claims pending herein are believed to be in condition for allowance.

1. Response to 35 USC §102(b) Rejection Based on Barker Jr. et al

Prior claims 1-4, 6 and 8-20 of the present application attracted a rejection under 35 USC §102(b) as allegedly anticipated by Barker Jr. et al (US 5,540,703). In this regard, the Examiner asserts that Barker Jr. et al anticipates such claims since it discloses a method for tying together at least two bone parts using a closed loop flat braided surgical cable, wherein the cable has two end parts around at least part of the objects to be tight together, urging the objects together by exerting a force on the two end parts and locking the cable. The Examiner also asserts that the objects are urged together by exerting a force comprising a drawing force and a twisting force as shown by Figures 7-17 and Figures 1, 3—4 and 19-22 of Barker Jr. et al.

¹ "A force is then exerted to tension the cable around the objects or bone parts....e.g. by connecting a device...."

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Applicants respectfully disagree with the Examiner that Barker Jr. et al anticipates the present invention as defined in independent claims 1 and 19 presented herewith. In this regard, a significant technical difference between the present invention according to claims 1 and 19 and the disclosure of Barker Jr. et al US 703 is that the latter does not teach urging the objects together and **further tensioning** the surgical cable around the objects with the **help of a device**.

As also noted during prior prosecution, Barker Jr. et al only discusses various methods of tying objects by placing a cable around the objects to be tied, the cable being provided with a loop at one end and inserting the second cable end through the loop and pulling the second cable end to reduce the size of the loop and to tighten the opening around the objects to be tied together (Barker Jr. et al at col. 3, lines 20-32).

Also, none of the Figures cited by the Examiner teaches twisting the cable in a similar manner with the present invention. The present invention embodies twisting the cable by using a device, for example a device shoved between the knot and the object or bone part closest to the knot and turning the device around, the turning being carried out in a plane parallel to the object or bone part (see page 4, lines 19-25 of the original specification).

Furthermore, none of the Figures 1, 3-4, 7-17, 19-22 of Barker Jr. et al embodies **further tensioning the cable with a device**. Moreover, from figures 33-39 of Barker Jr. et al, it can be clearly concluded that the tensioning is done by hand – i.e., no device at all is contemplated to be used for this purpose, contrary to the present invention.

Therefore, it is respectfully submitted that for at least the above mentioned reasons the present invention as defined in claims 1-4, 6 and 8-20 is not anticipated by Barker Jr. et al.

Applicants also note that the present invention is patentably unobvious over Barker Jr. et al. In this regard, one disadvantage of the method of Barker Jr. et al is that the cable is maintained in its tightened state only by the strength of the knots. If the knots fail, the cable un-tightens and has to be replaced via a surgical procedure. Furthermore, because in various embodiments the method of Barker Jr. et al uses multiple knots to lock the cable (see Barker Jr. et al's Figs. 7 and 10), the probability of knot failure increases, a problem also acknowledged by Barker Jr. et al themselves (col. 2, lines 64-65):

"However, the material's surface lubricity makes it difficult to tie a fast tensionable knot in the cable."

Barker Jr. et al try to overcome such disadvantages by using complicated constructions where they create loops secured with non-self-loosening knots. However, even with such constructions, Barker Jr. et al are aware of the possibility of failure of these devices (col. 5, lines 62-64).

"In the event the cable does fail, no threat of damage to surrounding tissue is posed."

In the method according to the present invention, a knot failure is completely avoided by further tensioning the cable with the help of a device around the objects to be tied. This way, most of the tension that builds up by tightening the cable diminishes along the cable part towards the knot and consequently, the knot is only lightly loaded (see page 4, lines 3-18 of the original specification). Therefore, in the method according to the present invention an effective uncoupling is achieved between the tension in the surgical cable and the load on the knot. Accordingly, no complicated knots or loops are needed to secure the cable against forces acting to counter the exerted force (see page 4, lines 3-18 of the original specification).

Barker Jr. et al provides no suggestion that the fixation of the surgical cable can be improved by further tensioning the cable with the help of a device around the objects to be tied together as defined in pending independent claims 1 and 19. Furthermore, Barker Jr. et al does not contain the slightest hint, let alone a concrete disclosure, that further tensioning of the surgical cable with a device leads to improved fixation of the surgical cable.

For the above reasons it is submitted that the present invention is also patentably distinct over Barker Jr. et al.

2. Response to 35 USC §102(b) Rejection Based on McLeod et al

The Examiner asserts that prior claims 1, 3-7, 11-15 and 17-20 of the present application, are anticipated by McLeod et al (US 5,800,543) under 35 USC §102(b). To support his arguments, the Examiner cites Fig.10 of McLeod. Based on this figure, the Examiner asserts that the cable is locked against forces countering the exerted force, wherein the exerted force is a torsion force and the exerted force comprises a drawing force and a twisting force.

Applicants respectfully disagree with the Examiner's point of view. Specifically, the same rationale with regard to the patentability of the present invention over Barker Jr. et al noted above, apply equally to the patentability of the present invention over McLeod et al.

In this regard, the object of McLeod et al is to provide an artificial ligament or ligament augmentation devices and a method of manufacturing thereof. McLeod et al does not disclose a method of tying together objects using a surgical cable. Furthermore, McLeod et al does not give the slightest hint, let alone a concrete disclosure, about laying the cable around the object to be tied together, urging the objects together, further tensioning the cable with the help of a device around the

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objects to be tied together and locking the cable against forces acting to counter the exerted force.

According to the description of McLeod et al, Fig.10 only shows an autologous graft (22) that is fixed in place with anchor members denoted (25) and (33). There is not even the slightest hint in either Fig.10 or the description of McLeod et al that a twisting or a drawing force can be applied with the help of these anchor members. Fig.10 and the description of McLeod et al only teach to fix one end of the autologous graft to the bone with an anchor member, the other end being secured by suturing to tissue or by another anchor member (col. 2, lines 8-13).

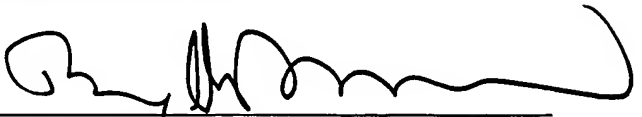
Therefore, it is respectfully submitted that for at least the above mentioned reasons the present invention is not anticipated by McLeod et al. Furthermore, neither Barker Jr. et al nor McLeod et al, alone or combined, provide an incentive to the ordinarily skilled person to achieve the present invention. None of the cited documents has the features and advantages of the present invention as discussed previously.

In view of the amendments and remarks submitted herewith and during prosecution to date, it is suggested that all claims now pending herein are in condition for prompt allowance. Official Notice to that effect is therefore solicited.

Respectfully submitted,

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